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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,091	11/17/2003	Bradford G. Corbett JR.	20470.015-AP	3254

42922 7590 12/20/2005

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EXAMINER

STAICOVICI, STEFAN

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 12/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

15

Office Action Summary	Application No.	Applicant(s)	
	10/715,091	CORBETT, BRADFORD G.	
	Examiner	Art Unit	
	Stefan Staicovici	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed October 14, 2005 has been entered. Claims 1-4 are pending in the instant application.

Terminal Disclaimer

2. The terminal disclaimers filed on October 14, 2005 disclaiming the terminal portion of any patent granted on this application that would extend beyond the expiration date of US Patent No. 6,328,309, US Patent No. 6,676,886 and US Patent Application Serial No. 10/776,842 have been reviewed and are accepted. The terminal disclaimers have been recorded.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corbett, Jr. (US Patent No. 6,328,309 B1) in view of Doolittle (US Patent No. 3,827,660).

Corbett, Jr. ('309) teaches the basic claimed process of installing a gasket in a socket end of a thermoplastic pipe which is used to form a pipe coupling including, providing a mandrel with an inner end and an outer end and having a generally cylindrical outer working surface;

installing a gasket at a first circumferential position on the outer working surface, the gasket having at least selected surfaces coated with a spray-on anti-friction coating wherein the spray-on anti-friction coating is applied by spraying on a dry powder followed by heating the powder to cause it to be fixed; providing a retention member at a second circumferential location on the mandrel nearer the inner end of the mandrel, the retention member abutting the gasket in a normally extended position but being retractable to a retracted position in a subsequent manufacturing step; heating a socket end of the thermoplastic pipe; forcing the heated socket end of the thermoplastic pipe over the working surface of the mandrel and over the gasket with the retention member being in the extended position, whereby the heated socket end of the thermoplastic pipe flows over the gasket to form a retention groove for retaining the gasket and again contacts the working surface of the mandrel; cooling the heated socket end of the thermoplastic pipe; retracting the cooled socket end of the thermoplastic pipe and the retained gasket from the working surface of the mandrel (see claim 1 of Corbett, Jr. ('309)). Further, Corbett, Jr. ('309) teaches that said sprayed anti-friction coating is polytetrafluoroethylene (TeflonTM) (see claim 6 of Corbett, Jr. ('309)).

Regarding claim 1, although Corbett, Jr. ('309) teaches a TeflonTM anti-friction coating, Corbett, Jr. ('309) does not teach a polyurethane anti-friction coating. Doolittle ('660) teaches that both TeflonTM and polyurethane coatings are used as anti-friction coatings (see col. 4, lines 5-10). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a polyurethane coating as taught by Doolittle ('660) as an equivalent alternative to a TeflonTM coating to the gasket in the process of Corbett, Jr. ('309) because, Doolittle ('660) specifically

teaches that TeflonTM and polyurethane coatings are equivalent alternatives for making an anti-friction coating. It is noted that said polyurethane coating would withstand temperature, chemical attack and abrasion because polyurethane, like any other polymeric material, to a certain degree has such properties of resisting temperature, chemical attack and abrasion.

In regard to claim 2, because the process of Corbett, Jr. ('309) in view of Doolittle ('660) teaches a polyurethane anti-friction coating, it is submitted that said coating has the same properties as those claimed.

Specifically regarding claim 3, Corbett, Jr. ('309) teaches spraying an anti-friction coating by spraying a dry powder.

Regarding claim 4, Corbett, Jr. ('309) teaches that the gasket is an elastomeric, ring shaped member having a circumferential contact area and an exterior surface, and wherein the anti-friction coating is applied to at least selected portions of the circumferential contact area (see claim 7 of Corbett, Jr. ('309)).

5. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corbett, Jr. (US Patent No. 6,676,886 B2) in view of Corbett, Jr. (US Patent No. 6,328,309 B1) and in further view of Doolittle (US Patent No. 3,827,660).

Corbett, Jr. ('886) teaches the basic claimed process of installing a gasket in a socket end of a molecularly oriented thermoplastic pipe which is used to form a pipe coupling including, providing a mandrel with an inner end and an outer end and having an outer working surface; installing a gasket at a first circumferential position on the outer working surface; providing a backup collar at a second circumferential location on the mandrel, the backup collar having an

exposed lip portion which abuts the gasket at an acute angle with respect to the outer working surface of the mandrel; heating a socket end of the thermoplastic pipe; forcing the heated socket end of the thermoplastic pipe over the working surface of the mandrel and over the gasket and backup collar, whereby the heated socket end of the thermoplastic pipe flows over the gasket to form a retention groove for retaining the gasket; retracting the backup collar; cooling the heated socket end of the thermoplastic pipe; retracting the cooled socket end of the thermoplastic pipe and the retained gasket from the working surface of the mandrel; wherein the gasket is an elastomeric, ring shaped member having a circumferential contact area and an exterior surface, the exterior surface forming a sloped contact area for contacting the lip portion of the backup collar in complimentary fashion; wherein the sloped contact area of the gasket exterior surface also forms an acute angle with respect to the working surface of the mandrel; wherein the complimentary acute angles of the backup collar and gasket form a wedge shaped contact area which serves to retain the gasket in its initial circumferential position on the working surface of the mandrel as the heated pipe is forced over the mandrel and gasket; the wedge shaped contact area exerting both a longitudinal restraining force along the pipe longitudinal axis and a radial restraining force which is perpendicular to the pipe longitudinal axis to force the gasket radially inward in the direction of the mandrel as the pipe is pushed over the mandrel.

Regarding claims 1 and 3, Corbett, Jr. ('886) does not teach spraying an anti-friction coating. Corbett, Jr. ('309) teaches spraying a TeflonTM anti-friction coating onto the gasket. Therefore, it would have been obvious for one of ordinary skill in the art to have sprayed an anti-friction coating as taught by Corbett, Jr. ('309) in the process of Corbett, Jr. ('886) because

Corbett, Jr. ('309) specifically teaches that an anti-friction coating provides for an improved installation process by reducing the required insertion force for the male, spigot end when entering the female, spigot end and also because both references solve similar problems.

Further regarding claim 1, although Corbett, Jr. ('886) in view of Corbett, Jr. ('309) teaches a TeflonTM anti-friction coating, Corbett, Jr. ('886) in view of Corbett, Jr. ('309) do not teach a polyurethane anti-friction coating. Doolittle ('660) teaches that both TeflonTM and polyurethane coatings are used as anti-friction coatings (see col. 4, lines 5-10). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a polyurethane coating as taught by Doolittle ('660) as an equivalent alternative to a TeflonTM coating to the gasket in the process of Corbett, Jr. ('886) in view of Corbett, Jr. ('309) because, Doolittle ('660) specifically teaches that TeflonTM and polyurethane coatings are equivalent alternatives for making an anti-friction coating. It is noted that said polyurethane coating would withstand temperature, chemical attack and abrasion because polyurethane, like any other polymeric material, to a certain degree has such properties of resisting temperature, chemical attack and abrasion.

In regard to claim 2, because the process of Corbett, Jr. ('886) in view of Corbett, Jr. ('309) and in further view of Doolittle ('660) teach a polyurethane anti-friction coating, it is submitted that said coating has the same properties as those claimed in claim 2.

Specifically regarding claim 4, Corbett, Jr. ('886) teaches that the gasket is an elastomeric, ring shaped member having a circumferential contact area and an exterior surface. Further, Corbett, Jr. ('309) teaches that the anti-friction coating is applied to at least selected

portions of the circumferential contact area. Therefore, it would have been obvious for one of ordinary skill in the art to have sprayed an anti-friction coating as taught by Corbett, Jr. ('309) in the process of Corbett, Jr. ('886) in view of Doolittle ('660) because Corbett, Jr. ('309) specifically teaches that an anti-friction coating provides for an improved installation process by reducing the required insertion force for the male, spigot end when entering the female, spigot end.

Response to Arguments

6. Applicant's arguments filed October 14, 2005 have been considered.

7. Applicant argues that the art of record does not teach "a gasket coating which, in addition to providing improved frictional properties, also provides oil, chemical and environmental protection" because it "is a high performance coating that will withstand severe temperature, chemical attack and abrasion" (see page 6 of the amendment filed 10/14/2005). In response, it is noted that this argument is drawn to a newly presented claim limitation not previously presented that has been rejected in this Office Action as set forth above. Specifically, as shown above, it is submitted that said polyurethane coating taught by the art of record would withstand temperature, chemical attack and abrasion because polyurethane, like any other polymeric material, to a certain degree has such properties of resisting temperature, chemical attack and abrasion.

8. In response to applicant's argument that Doolittle ('660) is nonanalogous art (see page 7 of the amendment filed 10/14/05), it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem

with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case:

(a) the primary reference of Corbett, Jr. ('886) teaches the basic claimed process of installing a gasket in a socket end of a molecularly oriented thermoplastic pipe;

(b) the secondary reference of Corbett, Jr. ('309) teaches spraying a TeflonTM anti-friction coating onto said gasket in order to provide for an improved installation process by reducing the required insertion force for the male, spigot end when entering the female, spigot end;

(c) the secondary reference of Doolittle ('660) teaches that both TeflonTM and polyurethane coatings are used as anti-friction coatings (see col. 4, lines 5-10).

Therefore, it would have been obvious for one of ordinary skill in the art to have sprayed an anti-friction coating as taught by Corbett, Jr. ('309) in the process of Corbett, Jr. ('886) because Corbett, Jr. ('309) specifically teaches that an anti-friction coating provides for an improved installation process by reducing the required insertion force for the male, spigot end when entering the female, spigot end and also because both references solve similar problems. Further, it would have been obvious for one of ordinary skill in the art to have provided a polyurethane coating as taught by Doolittle ('660) as an equivalent alternative to a TeflonTM coating to the gasket in the process of Corbett, Jr. ('886) in view of Corbett, Jr. ('309) because, Doolittle ('660) specifically teaches that TeflonTM and polyurethane coatings are equivalent alternatives for making an anti-friction coating. Hence, both Corbett, Jr. ('309) and Doolittle

(‘660) solve the same problem of friction by using a Teflon™ coating in the case of Corbett, Jr. (‘309) or a polyurethane coating in the case of Doolittle (‘660). Further, it is noted that under MPEP §2144, “[T]he reason or motivation to modify the reference may often suggest what the inventor has done, but for a different purpose or to solve a different problem. It is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by applicant. *See, In re Linter*, 458 F.2d 1013, 173 USPQ 560 (CCPA 1972).

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

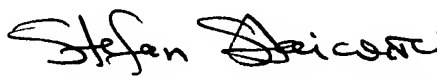
Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Staicovici, Ph.D. whose telephone number is (571) 272-1208. The examiner can normally be reached on Monday-Friday 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P. Colaianni, can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stefan Staicovici, PhD



Primary Examiner

12/13/05

AU 1732

December 13, 2005